Abstract

A method for provisioning a ring-based network is based on a routing of demands on shortest paths, according to a routing metric, and then assigning the routed demands to a collection of rings provisioned from a set of rings that meets preselected criteria, such as having less than a given number of nodes, and a mileage measure that is less than a given mileage upper threshold. The rings are provisioned to minimize a cost function that accounts for the cost of covering demands in rings, and the cost of failing to cover demands in rings. Further, an ordering of the traffic demands is determined that allows for routing as many traffic demands as possible.